

REMARKS / DISCUSSION OF ISSUES

In the final Office action dated April 23, 2010, claims 1-19 are pending and stand rejected. Claims 1, 7, 11, and 16 are independent.

Cited art

The following references have been cited and applied in the present Office Action: U.S. Patent Application Publication 2004/0116122 to Zeira et al. ("Zeira"), U.S. 2003/0123524 to Buchert et al. ("Buchert"), U.S. 2005/0111408 to Skillermark et al. ("Skillermark"), and U.S. 2003/0192003 to Das et al. ("Das").

35 U.S.C. § 102

Claims 1 and 11 stand rejected under 35 U.S.C. 102(e) as allegedly being anticipated by Zeira. Applicants respectfully submit that for at least the following reasons, Zeira does not anticipate claims 1 and 11.

In order for a reference to anticipate a claim, the MPEP 2131 requires the reference to teach every element of the claim. According to MPEP 2131, "[t]he identical invention must be shown in as complete detail as is contained in the ... claim."

Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

It is respectfully submitted that the Office Action fails to establish a *prima facie* case of anticipation of claim 1 under 35 U.S.C. 102(e). Reconsideration of this rejection and allowance of the present application in view of the following remarks is respectfully requested.

Applicants' claim 1 recites,

A method for mitigating P2P (Peer-to-Peer) interferences, performed by a network system, comprising:

determining redundant code group information, according to code group usage information of a cell in which two UEs (User Equipments) are attempting to establish a P2P link camp, and also

according to the code group usage information of a cell's adjacent cells; and

selecting a scrambling code from the redundant code group information and assigning it to the two UEs, so that the two UEs can perform a scrambling operation on P2P signals to be transferred between the two UEs by using the scrambling code. (Emphasis added)

Zeira relates to reducing intercellular interference in wireless communication systems (Abstract). The Office Action cites Zeira at paragraphs [0012], [0013], [0015], [0017], [0018], [0023], [0025], and [0030] as allegedly anticipating a method for mitigating P2P (Peer-to-Peer) interferences, performed by a network system, comprising: determining redundant code group information, according to code group usage information of a cell in which two UEs (User Equipments) attempting to establish a P2P link camp, and also according to the code group usage information of the cell's adjacent cells; and selecting a scrambling code from the redundant code group information and assigning it to the two UEs, so that the two UEs can perform a scrambling operation on P2P signals to be transferred between the two UEs by using the scrambling code, as set forth in claim 1. Applicants respectfully submit that Zeira does not disclose the above-emphasized features of claim 1.

Zeira does not disclose the features of determining redundant code group information, according to code group usage information. Redundant code group information, as explained in Applicants' specification beginning at the bottom of page 18, relates to the code groups which are not used by both the cell where the user equipments are camping and the adjacent cells. In contrast to Applicants' claim 1, Zeira teaches an inter-cell interference cancellation algorithm which allegedly relates to codes that are used by a cell. For example, Zeira at paragraph [0030] recites "[t]he blind code detectors 50 determine corresponding code matrices used by a particular cell. . . . Each C_1 . . . C_L corresponds to one or more codes that are used in a particular cell." Emphasis added. As such, Applicants' claim 1 is distinguished from Zeira because Zeira does not disclose an inter-cell interference cancellation algorithm based at least in part on code groups which are not used by camping on and adjacent cells, as in the redundant code group information of Applicants' claim 1. Therefore, Zeira does

not disclose all of the required elements of Applicants' claim 1. Accordingly, Applicants respectfully request the withdrawal of the rejection to claim 1 under 35 U.S.C. 102(e).

Furthermore, Zeira does not disclose the feature of selecting a scrambling code from the redundant code group information and assigning it to the two UEs. As pointed out above, Zeira discloses an algorithm which allegedly relates to code groups that are used in a particular cell. However, in contrast to Applicants' claim 1, Zeira does not disclose redundant code group information or code groups which are not used by the camping on and adjacent cells, as pointed out above. Since Zeira does not disclose the feature of redundant code group information, Zeira can not disclose selecting a scrambling code from the redundant code group information and assigning it to the two UEs, as required in Applicants' claim 1. Therefore, Zeira does not anticipate Applicants' claim 1, and the rejection to claim 1 under 35 U.S.C. 102(e) should be withdrawn.

Independent claim 11 is different from claim 1. For example, claim 11 is directed toward a network system, while claim 1 is directed toward method. Although different from claim 1, claim 11 includes patentable subject matter similar to that of claim 1 as explained above.

The Office Action uses the same arguments as set forth with regard to claim 1, alleging that claim 11 is anticipated by Zeira under 35 U.S.C. §102(e).

Applicants repeat the above arguments for claim 1 and apply them to claim 11. As pointed out above, none of these cited paragraphs of Zeira disclose determining redundant code group information, according to code group usage information of a cell in which two UEs (User Equipments) attempting to establish a P2P link camp, and also according to the code group usage information of the cell's adjacent cells. Furthermore, Zeira does not mention or disclose selecting a scrambling code from the redundant code group information and assigning it to the two UEs, so that the two UEs can perform a scrambling operation on P2P signals to be transferred between the two UEs by using the scrambling code. As such, Applicants respectively submit that the Office has not presented a prima facie case anticipation and the rejection to independent claim 11 under 35 U.S.C. 102(e) is unfounded and should be withdrawn. Accordingly,

Applicants respectfully submit that claim 11 is in condition for allowance.

35 U.S.C. § 103

Claims 2 and 12 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Zeira in view of Buchert.

Claims 3 and 13 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Zeira in view of Buchert and further in view of Skillermark.

Claims 4-6, 14, and 15 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Zeira in view of Buchert and further in view of Das.

Claims 7-9 and 16-18 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Zeira in view of Skillermark.

Claims 10 and 19 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Zeira in view of Skillermark and further in view of Das.

Applicants respectfully traverse these rejections.

Applicants' claim 7 recites,

*A method for mitigating P2P (Peer-to-Peer) interferences, performed by a UE (User Equipment), comprising:
acquiring code group usage information of a cell where the UE is camping through a cell search procedure;
reading the code group usage information of adjacent cells through an adjacent cell search procedure; and
sending the code group usage information of the cell where the UE is camping to a network system and also sending the code group usage information of the cell's adjacent cells to the network system.*
(Emphasis added)

The Office Action cites the combination of Zeira and Skillermark as allegedly disclosing or suggesting the features of claim 7. Applicants respectfully submit that Zeira and Skillermark, separately or in combination, do not disclose or suggest the features of sending the code group usage information of the cell where the UE is camping to a network system and also sending the code group usage information of the cell's adjacent cells to the network system, as set forth in Applicants' claim 7.

Zeira discloses several algorithms for inter-cell interference cancellation. However, Zeira does not disclose or suggest a method performed by user equipment

(UE) comprising sending code group information of cells to the network system. Likewise, Skillermark does not suggest the UE sending code group information to the network system.

Furthermore, the feature of sending the code group usage information of the cell where the UE is camping to a network system and also sending the code group usage information of the cell's adjacent cells to the network system would not be obvious to a person having ordinary skill in the art based on the combination of Zeira and Skillermark. For example, Zeira at Fig. 4 and paragraph [0027] discloses an embodiment of an inter-cell interference canceller allegedly for use in reception of high speed downlink packet access, which is in contrast to the feature of Applicants' claim 7 of a method performed by a UE sending code group usage information of a cell to a network system. Also, Skillermark at paragraphs [0027] and [0028] discloses a mobile station (MS), (also referred to as user equipment (UE) as defined by Skillermark at paragraph [0017]), wherein the UE allegedly determines the code group so it can derive the scrambling code, the long basic midamble code, and slot and frame timing of a cell. Upon identifying the long basic midamble code, the downlink scrambling code and cell parameter are also allegedly known. Because Skillermark's UE allegedly derives several items based on the code group, a person having ordinary skill in the art would be led to believe that there would be no further need for the UE to send the code group to the network system. Therefore, the features of Applicants' claim 7 would not be obvious to a person having ordinary skill in the art based on the combination of Zeira and Skillermark. Accordingly, Applicants respectfully request the withdrawal of the rejection to claim 7 under 35 U.S.C. § 103(a).

In addition, the Office Action does not provide any explanation or supporting evidence as to why one of ordinary skill in the art would believe that Skillermark's alleged selected interference cancellation methodologies are related to the method for mitigating P2P (Peer-to-Peer) interferences as claimed because Skillermark is not related to P2P communications. As such, Skillermark does not address the problems of interference related to P2P communications. In contrast to Applicants' claim 7, Skillermark's solution is based on insight that users that are close to a cell boundary are

also "close to doing a handover." (See Skillermark at paragraphs [0013] and [0021]). It is generally known that a handover between cells is not the same as P2P communications. Thus, Applicants respectfully submit that a person having ordinary skill in the art would not believe that Skillermark is related to mitigating P2P interference.

On page 6, the Office Action simply provides a conclusory statement of "in order to reduce computational complexity and degradation of the performance of the system in an unlimited number of users in the cells, and to increase the quality of service perceived by the users," to support the combination of references in making this rejection.

KSR makes clear that rejections on obviousness cannot be sustained by mere conclusory statements; instead KSR requires that an Examiner provide "some articulated reasoning with some rationale underpinning to support the legal conclusion of obviousness." (KSR Opinion at p. 14). An Examiner must "identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does," (KSR Opinion at p. 15). And, the Examiner must make "explicit" this rationale of "the apparent reason to combine the known elements in the fashion claimed," including a detailed explanation of "the effects of demands known to the design community or present in the marketplace" and "the background knowledge possessed by a person having ordinary skill in the art." (KSR Opinion at p. 14). Anything less than such an explicit analysis may not be sufficient to support a prima facie case of obviousness.

Accordingly, Applicants respectfully submit that the Office Action has not presented a prima facie case of obviousness and the rejection to claim 7 should be withdrawn.

Independent claim 16 is different from claim 7. For example, claim 16 is directed toward a UE (user equipment), while claim 7 is directed toward method. Although different from claim 7, claim 16 includes patentable subject matter similar to that of claim 7 as explained above.

The Office Action uses the same arguments as set forth with regard to claim 7, alleging that claim 16 is unpatentable over Zeira in view of Skillermark under 35 U.S.C. §103(a).

Applicants repeat the above arguments for claim 7 and apply them to claim 16. As pointed out above, the combination of Zeira and Skillermark do not disclose, suggest, or deem obvious to a person having ordinary skill in the art the features of sending the code group usage information of the cell where the UE is camping to a network system and also sending the code group usage information of the cell's adjacent cells to the network system. As such, Applicants respectfully submit that the the rejection to independent claim 16 under 35 U.S.C. 103(a) is unfounded and should be withdrawn. Accordingly, Applicants respectfully submit that claim 16 is in condition for allowance.

With respect to dependent claims 2-6, 8-10, 12-15, and 17-19, the Office Action cites additional references as noted above. However, each of dependent claims 2-6, 8-10, 12-15, and 17-19 depends from an allowable independent base claim and inherits all of the respective features of the independent base claim. The additional cited references do not cure the deficiencies as noted with respect to the independent claims. Thus, each of dependent claims 2-6, 8-10, 12-15, and 17-19 is allowable under 35 U.S.C. §103 for at least the same reasons as discussed above with respect to their independent base claims, from which they depend, with each dependent claim containing further distinguishing patentable features.

As such, it is respectfully submitted that the rejections of claims 2-10 and 12-19 under 35 U.S.C.103 (a) have been overcome. Hence, withdrawal of the rejections and early allowance of the claims are respectfully requested.

Conclusion

In view of the foregoing, Applicants respectfully request that the Examiner withdraw the rejections of record, allow all the pending claims, and find the application in condition for allowance. If any points remain in issue that may best be resolved through a personal or telephonic interview, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

If there are any errors with respect to the fees for this response or any other papers related to this response, the Director is hereby given permission to charge any shortages and credit any overcharges of any fees required for this submission to Deposit Account No. 14-1270.

Respectfully submitted,

/ Hay Yeung Cheung /

By: Hay Yeung Cheung
Registration No.: 56,666
973-401-7157
For: Kevin C. Ecker
Registration No.: 43,600
914-333-9618

Please direct all correspondence to:
Kevin C. Ecker, Esq.
Philips Intellectual Property & Standards
P.O. Box 3001
Briarcliff Manor, NY 10510-8001